Answer to R1

I believe that the manuscript is valuable and that its publication will enrich the existing literature used by engineers solving practical problems in the field of water management in karst areas. Namely, the paper promotes the KarstMod program, which was developed specifically for modeling the studied hydraulic systems using the Lumped Karst Model. At the same time, I believe that the manuscript needs to be significantly improved, and to this end I have several suggestions/comments. At the same time, I must mention that in its current form I see no room for publishing the manuscript as a scientific paper, but as an "education and communication report". In order for the manuscript to be classified as a scientific paper, it must contain a new methodology that can be objectively evaluated. Also, in some passages, the manuscript resembles a guide to using the program KarstMod, which is very useful and valuable, but does not fall into the category of scientific paper. Below I list my suggestions and comments.

Thanks a lot for these positive feedback. It is true that we initially submitted the manuscript as "scientific paper". We are totally favorable to a reclassification of the submitted manuscript as a "Technical note".

The paper discusses the newly introduced possibilities in terms of: uncertainty in input data, multi-center calibration and model evaluation. Of the newly introduced options, I consider model calibration to be the most valuable, as it is always a very complex technical task. If I have understood correctly, convergence is not guaranteed in the calibration procedure, but the search for the optimal parameter set is exclusively stochastic (using the MC method) until the values n_max and t_max are reached (which also need to be explained in more detail). If this is really the case, then I suggest to consider implementing one of the many optimization methods (heuristic optimization algorithms) where the search for the optimal parameter set would be dependent on the search history, i.e. directed (which then allows for much better calibration).

KarstMod "*is devoted to promoting good practices in hydrological modeling for learning and occasional users.*". Then, KarstMod includes one single optimization procedure, based on sampling of the parameter space. For more advanced user we plan to provide a python version allowing to run parameter estimation and sensitivity analysis with dedicated tools. This, point is given in conclusion:

"Also, a Python version is required for a better connection with an additional framework for sensitivity analysis such as SAFE toolbox (Pianosi et al., 2015) and for model calibration procedures such as particle swarm optimization (Eberhart and Kennedy, 1995; Lee, 2014). Finally, the development of the KarstMod modeling platform will benefit better transparency and repeatability with an open-source approach, as observed on other numerical tools (Pianosi et al., 2020)."

In addition to the above, I would like to make some further observations below:

- Appendix A is small enough that it can be integrated into the manuscript itself and does not need to be detached

Appendix A has been deleted and its content is now included in the manuscript.

- C is the designation for the unit of measurement of temperature and not its dimension, which according to SI is Theta.

To avoid confusion between units of measurement and dimension of physical quantities, we decided to give only units of measurement that is required to run KarstMod. This may sound more relevant to the reader since the manuscript is a Technical note.

- I think that the comments under the title "Challenges in karst groundwater resources" should be significantly shortened (as it is assumed that the paper will be read by those who are already familiar with the above) and this part of the text should then also be included in the Introduction.

We have shortened this section, focusing on the more relevant challenges that we can addressed with KarstMod. We assume that the section "Background and motivations" is still required to guide the reader in the limitation of KarstMod.

- Since there are many acronyms or abbreviations used in the manuscript, I would suggest systematizing these terms, perhaps at the very end of the paper, i.e. consider the possibility of introducing a nomenclature. Also, abbreviations that are mentioned but not used later (e.g. SVA) should be removed to improve the systematic and conciseness of the manuscript

We have now included a nomenclature, and also change some notations in the manuscript for consistency.

- When stating physical quantities, make sure that you do not confuse units of measurement and dimensions of physical quantities (in brackets []).

To avoid confusion between units of measurement and dimension of physical quantities, we decided to give only units of measurement that is required to run KarstMod. This may sound more relevant to the reader since the manuscript is a Technical note.

- I suggest not using abbreviations in the titles, but the full names of the physical quantities (this applies to all names, and their abbreviations can possibly be given in brackets).

No more abbreviations are given in section and sub-sections titles.

- What does Emin mean in point b of the PET routine? I would like to ask the authors to check that all names mentioned in the text are explained. The dimension or, better still, the unit of measurement should also be given next to each term. Since this paper is trying to promote the KarstMod program (i.e. interfaces of the same are used), I think it would be better to indicate the units of measurement (not the dimensions) in which the values are entered in the program.

We rephrased the section dedicated to the PET routine. The meaning of Emin is now explained and the units as well as selected values for constants in Oudin formula are now mentioned in the manuscript.

- Particular care should be taken when specifying arithmetic operations. It seems to me, for example, that in equation no. 2 the operation of multiplying scalar quantities is expressed with two different symbols, one of which is very unusual and the other is normally reserved for vector multiplication. Similarly, discontinuity in the function (as in the equation in question) would be more convenient to write with the command \begin{cases} (see Kronecker delta).

The notation is now homogeneous across all equations in the manuscript.

- In my opinion, the text should be improved, as statements such as "The Touvre karst system is a karst system..." are not particularly good.

The manuscript has received a round of revision where several section have been rephrased.